

- 1 2. (Original) The method of claim 1, after the instruction queue is full, further comprising
2 the step of requesting that instructions not be sent to the instruction queue.
- 1 3. (Original) The method of claim 1 wherein the step of terminating includes the step of
2 removing the instruction from the instruction queue.
- 1 4. (Original) The method of claim 1 wherein the various processing stages include one or
2 more of the following stages: fetching, issuing, sorting, executing, queuing, and
3 retiring.
- 1 5. (Original) The method of claim 1 wherein the instruction capable of early retirement
2 includes an identification tag for identifying whether the instruction is capable of
3 early retirement.
- 1 6. (Original) The method of claim 1 wherein NO-OP instructions, pre-fetch instructions,
2 branch instructions, nullified instructions, and predicated-false instructions are
3 identified as instructions capable of early retirement.
- 1 7. (Canceled) The method of claim 1 wherein the criteria for early retirement are met
2 when continued processing the instruction does not change the architectural state
3 of the system processing the instruction.
- 1 8. (Canceled) The method of claim 1 wherein the criteria for early retirement are met
2 when continued processing the instruction does not change the behavior of a
3 program running the instruction.

1 9. (Currently Amended) A computer-readable medium embodying instructions that cause
2 a computer to perform a method for retiring instructions processed through various
3 processing stages including an instruction queue, the method comprising the steps
4 of:
5 after processing the instructions until the instruction queue is full;
6 performing the following steps
7 stopping processing the instructions in the various processing
8 stages; and
9 for each instruction in the instruction queue, if the instruction meets
10 the criteria for early retirement, then
11 terminating the instruction; and
12 updating a system processing the instruction to
13 reflect that the instruction has been
14 terminated;
15 wherein the criteria for early retirement is met when at least one of the
16 following conditions is met: continued processing of the instruction
17 does not change the architectural state of the system processing the
18 instruction; continued processing of the instruction has no effect on
19 the behavior of a program running the instruction; the instruction
20 has completed its function without completing its full pipeline.

1 10. (Original) The computer-readable medium of claim 9 wherein the method, after the
2 instruction queue is full, further comprising the step of requesting that instructions
3 not be sent to the instruction queue.

- 1 11. (Original) The computer-readable medium of claim 9 wherein the step of terminating
2 includes the step of removing the instruction from the instruction queue.
- 1 12. (Original) The computer-readable medium of claim 9 wherein the various processing
2 stages include one or more of the following stages: fetching, issuing, sorting,
3 executing, queuing, and retiring.
- 1 13. (Original) The computer-readable medium of claim 9 wherein the instruction capable
2 of early retirement includes an identification tag for identifying whether the
3 instruction is capable of early retirement.
- 1 14. (Original) The computer-readable medium of claim 9 wherein NO-OP instructions,
2 pre-fetch instructions, branch instructions, nullified instructions, and predicated-
3 false instructions are identified as instructions capable of early retirement.
- 1 15. (Canceled) The computer-readable medium of claim 9 wherein the criteria for early
2 retirement are met when continued processing the instruction does not change the
3 architectural state of the system processing the instruction.
- 1 16. (Canceled) The computer-readable medium of claim 9 wherein the criteria for early
2 retirement are met when continued processing the instruction does not change the
3 behavior of a program running the instruction.
- 1 17. (Currently Amended) A system for retiring instructions processed through various
2 processing stages including an instruction queue, comprising:

first processing means ~~for processing the instructions until the instruction~~
queue is full;

stopping means; and

second processing means;

wherein

the first processing means processes the instructions until the

instruction queue is full; and

after the instruction queue is full

the stopping means ~~for stopping~~ causes processing of the

instructions to be stopped in the various processing

stages ~~once the instruction queue is full; and~~

~~second processing means for,~~ for each instruction in the

instruction queue if the instruction meets the criteria

for early retirement, then the second processing

means causes

~~terminating~~ the instruction to be terminated; and

~~updating~~ the system to be updated to reflect that the

instruction has been terminated; the criteria

for early retirement for the instruction is met

when at least one of the following conditions

is met: continued processing of the

instruction does not change the architectural

state of the system processing the instruction;

continued processing of the instruction has

no effect on the behavior of a program

running the instruction; the instruction has

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completed its function without completing its

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- 1 24. (New) The system of claim 17 wherein NO-OP instructions, pre-fetch instructions,
- 2 branch instructions, nullified instructions, and predicated-false instructions are
- 3 identified as instructions capable of early retirement.